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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,045	07/14/2003	Thomas Patrick Dawson	50P4530.01	6068

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EXAMINER

MOAZZAMI, NASSER G

ART UNIT PAPER NUMBER

2187

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/619,045

**Applicant(s)**

DAWSON, THOMAS PATRICK

**Examiner**

Nasser G Moazzami

**Art Unit**

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-17 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 8 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/14/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Information Disclosure Statement submitted by applicant on 07/14/2003 have been considered. See attached PTO-1449.

### ***Specification***

2. The disclosure is objected to because of the following informalities: the status of the related application listed in the specification must be updated.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 9-14, 16-17, 19-21 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Arlitt (US Patent No. 6272598).

As per claims 1, 3 and 9-11 Arlitt discloses a memory system, comprising: a memory cache responsive to a single processing unit [**cache memory 72 (see Fig. 2; also see column 3, lines 34-42)**], the memory cache arrangeable to comprise: a first independently cached area assigned to store a first number of data packets based on a first processing unit context [**storage area 73-73n (see Fig. 2)**]; and a second independently cached area assigned to store a second number of data packets based on a second processing unit context [**storage area 73-73n (see Fig. 2)**]; and a memory control system coupled to the memory cache, the memory control system configured to arrange the first independently cached area and the second independently cached area in such a manner that the first number of data packets and the second number of data packets coexist in the memory cache and are available for transfer between the memory cache and the single processing unit [**cache manager 74 (see Fig. 2)**].

As per claims 12-14, 16-17, 19-21 and 23, claims 12-14, 16-17, 19-21 and 23 encompass the same scope of the invention as those of claims 1, 3 and 9-11. Therefore, claims 12-14, 16-17, 19-21 and 23 are rejected for the same reasons as stated above with respect to claims 1, 3 and 9-11.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4-7, 15, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arlitt in view of Sturges (US Patent No. 6295580).

As per claims 2 and 4-7, Arlitt discloses the claimed invention, but fails to specifically disclose that the first number of data packets and the second number of data packets are concurrently available for bidirectional transfer between the memory cache and the single processing unit; the first and second processing unit contexts comprise one of: processes; threads; and tasks; a first CPU process and the second processing unit context comprises a second CPU process; each data packet comprises a smallest unit of transaction handled by the memory cache and comprises one of: a data word; a cache line and a number of bytes and the first independently cached area is configurable in such a manner that at least some of the first number of data packets are transferable from the first independently cached area in response to execution of the first CPU process by the single processing unit, and wherein the second independently cached area is configurable in such a manner that at least some of the second number of data packets are transferable from the second independently cached area in response to execution of the second CPU process by the single processing unit.

Sturges discloses a multi-tasking processor system includes a multi-tasking processor [**CPU 2 (see Fig. 1)**], a cache memory [**cache 22 (see Fig. 1)**] that is divided into cache partitions wherein each partition is alterable and have a plurality of addressable storage location [**banks B1-B4 (see Fig. 2)**]. The multi-tasking processor

is capable of executing concurrent processes simultaneously **[abstract; column 1, lines 5-8; column 2, line 5; column 3, lines 32-36]**.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time of the current invention to employ a cache memory as being taught by Sturges into Arlitt's system in order to be able to have a concurrent processing, so that the system's performance will be enhanced.

As per claims 15, 22 and 24, claims 15, 22 and 24 encompass the same scope of the invention as those of claims 2 and 4-7. Therefore, claims 15, 22 and 24 are rejected for the same reasons as stated above with respect to claims 2 and 4-7.

#### ***Allowable Subject Matter***

7. Claims 8 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser G Moazzami whose telephone number is (571) 272-4195. The examiner can normally be reached on 7:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**NASSER MOAZZAMI**  
**PRIMARY EXAMINER**



04/09/2005